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MONTANA RAIL PLAN

1983 SUPPLEMENT

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MONTANA RAIL PLAN

1983 SUPPLEMENT

PREPARED BY THE
MONTANA DEPARTMENT OF COMMERCE
TRANSPORTATION DIVISION

MARCH 1984

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CHAPTER 1

INTRODUCTION TO THE 1983 SUPPLEMENT

Reference Document

This publication will be used as an addendum to the 1982 Montana Rail Plan Update which was published in August of 1982. The 1982 Montana Rail Plan Update was approved by the Federal Railroad Administration in October of 1982. As an addendum the 1983 Supplement is not a stand-alone publication, but is to be used in conjunction with Montana's 1982 Rail Plan Update. A thorough understanding and acquaintance of that document is a prerequisite to using this Supplement.

Purpose

This document is intended to analyze three rail projects in the State that are being considered by the Montana Department of Commerce for possible funding. The projects would be located in the Butte, Lewistown to Geraldine, and Lewistown to Moore to Sipple areas.

The first project is the construction of rail siding and a unit grain train loading facility located nine miles west of Butte. The facility would have access to both the Union Pacific and Burlington Northern trackage. The ground breaking for this facility is projected for the 1984 construction season. The project has some benefits that are very desirable for Montana,

including construction jobs for the Butte-Anaconda area, a primary industry to stimulate the area's economy, and a tool to encourage competition which will lower the costs for transporting grain out of Montana. This last benefit is the most advantageous because it should lessen grain transportation costs paid by farming communities within a 150-mile radius of the proposed facility, and is expected to provide access to new grain markets.

The second project is the Lewistown to Moore to Sipple connection. This project includes 18 miles of rehabilitation from Lewistown to Moore, building 5.4 miles of new track over old Milwaukee right-of-way (where the old rail and ties have already been pulled up), and 1.0 mile of completely new construction to Sipple on the BN mainline. This would provide service to the Lewistown area without the necessity of crossing over major trestles or bridges. This project is also being considered for the 1984 construction season.

Finally, the State wishes to analyze the Lewistown to Geraldine branchline, which requires 41 miles of rehabilitation and 9 miles of new construction. At present, the line is embargoed due to a reportedly unsafe bridge. These analyses can be found in Chapter 2 of this document.

Method of Analysis

The method of analysis used in this publication is exactly the same as used in the 1982 Update and as described in Section 4

of that manual. For a thorough understanding of the approach used, please refer to pages 4-1 through 4-14 of the 1982 Montana Rail Plan Update.

Revisions to the Update

The majority of the information presented in the 1982 Montana Rail Plan Update accurately presents the rail situation in Montana as of this date. The Rail Planning Process, the State Rail Policies & Objectives, the State Energy Policy, and the Funding Process as presented in the introduction of that document have not been changed and will not be restated here. Any revisions to other sections of the Update have been duly noted in this document.

Public Participation

Rail User Survey

One-hundred percent of the shippers on the Lewistown to Geraldine, Lewistown to Heath, and Lewistown to Moore lines were contacted twice; once by mail which included a survey questionnaire, and once in person. The survey was mailed in January, 1983, and the personal contacts were made during February, 1983. A new survey form was used this year to gather as much pertinent information as possible. A copy of this new survey has been included in this manual as Appendix A.

Since the Butte project includes only new construction and new business, a survey of past performance is not possible.

A-95 Process

As with most federally funded studies, the 1982 Update was given a formal review in accordance with the Office of Management and Budget Circular A-95 revised, 41 CFR 2052, January 13, 1976.

In addition, this 1983 Supplement will be given the same review in accordance with the same circular.

Public Hearing

A public hearing was held in Geraldine the afternoon of March 7, 1983. At that time, the line's status and rehabilitation costs, as well as the projected economic viability of the project were discussed. Notices were posted in appropriate public locations and letters were sent to each individual shipper on the line to encourage their attendance. An estimated 215 persons attended. Only about 25 persons had been expected.

On December 14, 1983, a public hearing was held in the Silver Bow County Courthouse, Butte, Montana. The economic viability and necessity for a grain subterminal in the Silver Bow area was discussed. Notices were posted in appropriate public locations and published in the newspaper. More than 100 people were in attendance.

Response to FRA Comments

The State of Montana has not received formal FRA comments regarding the 1982 Update. Therefore, even though federal rail planning regulations require a response, none can be made.

CHAPTER 2

ANALYSIS OF THREE ADDITIONAL PROJECTS

This chapter is an in-depth analysis of three projects the Montana Department of Commerce is interested in supporting. At this time, there are a total of 44 projects that have been analyzed by the Department of Commerce for possible investment of FRA funds.

Eleven lines were analyzed in the original 1979 State Rail Plan and seven were analyzed in the 1980 Supplement. An updated report on each of these 18 lines is presented on pages 5-1 through 5-5 of the 1982 Update. In addition, the 1982 Update analyzed 23 previously unanalyzed lines on pages 5-6 through 5-230.

Two of the line segments analyzed in this supplement have been analyzed before under alternate project scenarios. The third is a new venture for Montana - this project investigates the possibility of investment into a single shipper facility near Butte. The ranking of these projects along with the projects analyzed in the 1982 Update can be found in Chapter 3 of this document.

PORT OF MONTANA'S
GRAIN SUBTERMINAL

Union Pacific Railroad

The State of Montana is investigating the possibility of becoming financially involved in a new grain subterminal. This project is proposed for construction at the only junction of Montana's two major railroads and the only intersection of Montana's two interstate highways. The location is approximately nine miles west of Butte on I-15 and one mile south of I-90. (See figure 2-1 and 2-2).

The developer, the Port of Montana, proposes to build a grain subterminal (with 750,000+ bushels of storage and 7,100 feet of trackage). One end of the track would connect to a main line owned and operated by the Union Pacific. The other end would be connected to a branchline over which the Burlington Northern and the Union Pacific both have trackage rights. The Port of Montana is seriously engaged in discussion with possible operators at this time and the arrangements with the Union Pacific regarding rail rates have been discussed.

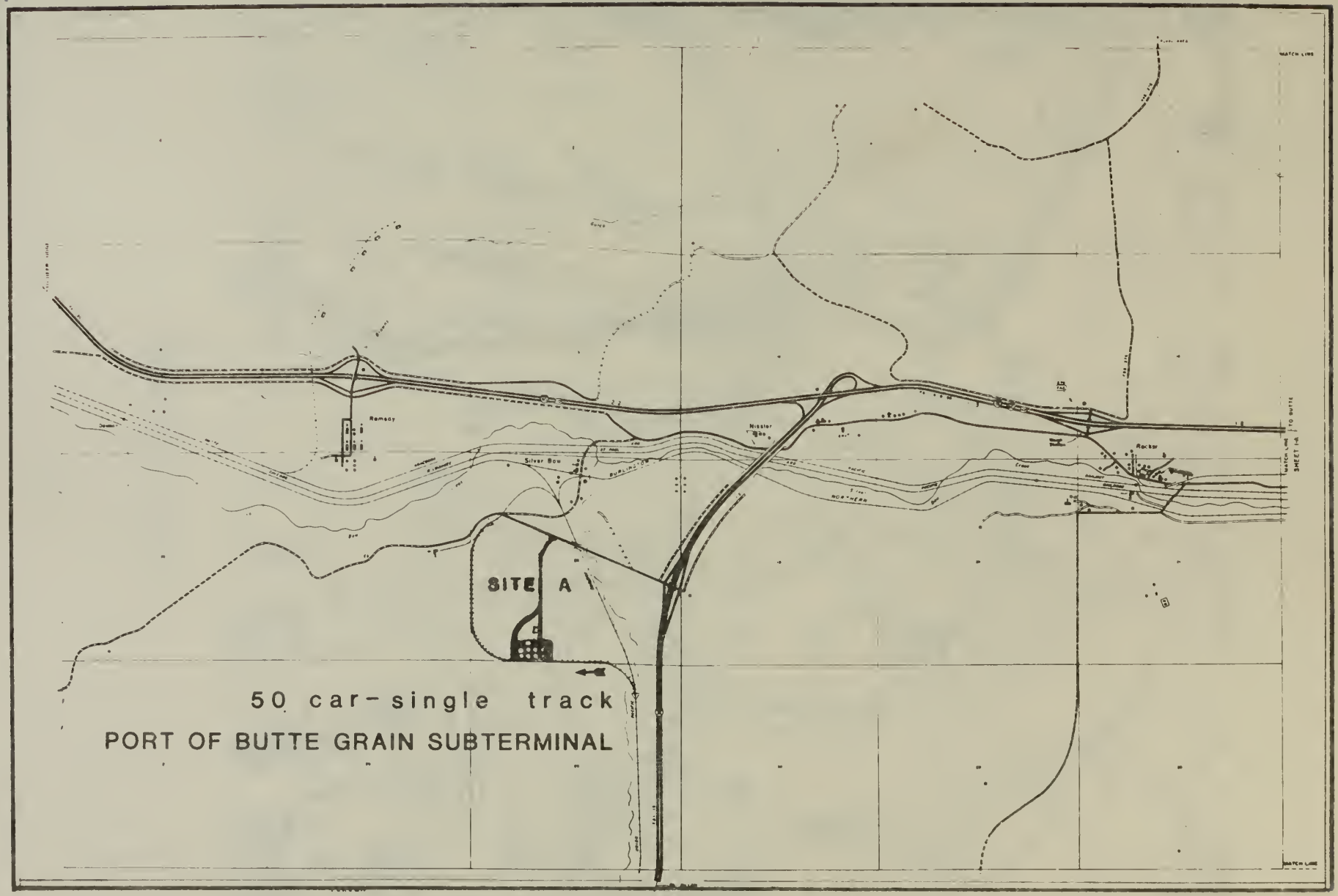


Figure 2-1

BUTTE GRAIN SUBTERMINAL

PORT OF BUTTE

0 5 10 20 40

One inch represents approximately 22 miles

LEGEND

Burlington Northern Lines

Butte, Anaconda & Pacific Lines

Union Pacific Lines

Proposed New Construction

Figure 2-2

The following is a summary of the status and issues affecting this project:

- It is centrally located to draw traffic from the north and south on Interstate 15, as well as from the east and west by Interstate 90.
- It will provide strong competition to the Burlington Northern which carries 96.9 percent of the rail tonnage originating in the State of Montana (refer to page 2-11 of the 1982 Rail Plan Update.)
- Many local elevators in Montana have closed in the past few years, and farmers now are locked into shipping via elevators on BN's trackage. By bringing in another carrier, Montana feels this will provide the farmer with an alternative to shipping by rail exclusively on BN's trackage. This increase in competition will result in rate relief for the Montana farmer.
- The Butte/Anaconda area has suffered severely in the past 12 months. Safeway, Stauffer Chemicals, and the Anaconda Copper Mining Company have scaled down their area operations.
- The concept of a subterminal supported by the Port of Montana for exporting Montana grain to southern markets has generated interest in the port from a variety of industries. The Port of Montana has been approached with proposals for the exportation of lumber, the

movement of unit trains of barley to southern markets, the placement of new feedlots in the Butte area, and the promotion of export animal feeds.

Rail Use

The proposed project includes 7,100 linear feet of industrial spur trackage, enough to store more than 100 covered hoppers. This will provide substantial storage for even the largest unit grain trains and additional access for future spur development.

The UP mainline into the project site is a good high quality line with a maximum freight speed of 60 mph. It carries less than three million gross ton-miles/mile each year and is rated as an FRA Class IV line.

Rail Service

According to the Union Pacific, service to the proposed facility will be available five days a week, if the operator desires it. It is assumed, though, that the elevator operator will initially choose less frequent service.

Highways

This subterminal proposal would increase traffic on the State's highways. However, the majority of the increase would be carried by I-15 and I-90. The Port of Montana has estimated that

by the fifth year up to 12,000,000 bushels of wheat and barley could be coming in by truck, which would result in a minimum of 8,275 trucks per year or 22.7 per day. Assuming that 60 percent would come from I-90 and 40 percent from I-15, this means an increase of 13.6 trucks per day on I-90 and 9.1 per day on I-15. In 1981, I-90 carried an ADT of 7,190 vehicles, 1,100 of which were trucks. This relates to a 1.2 percent and a 2.3 percent increase respectively in truck traffic on I-90 and I-15. These percent increase figures are relatively small. Because the roads in question are designed for this commercial traffic and are currently in good to excellent shape (only 3.8 percent deficiency on one highway North of Butte), and because funding for Interstate completion and maintenance is available, no significant highway system impact problems are expected. The State is considering allowing trucks to increase in size to 1,450 bushels (120,000 pounds) predicated on lowering the weight per axle. According to testimony presented to the State Legislature, this would decrease pavement wear and impact by any one truck, and therefore would further decrease the minimal impacts expected.

Conclusions

From the State's perspective, this proposal is desirable for many reasons, the most important of which are:

- providing the farmers in the State with lower grain transportation costs and expanded grain markets
- providing rail competition in a market dominant environment

- aiding the Butte/Anaconda economic situation

In addition, as can be seen by the Benefit/Cost Analysis presented in Table 2-1.8, this project will definitely provide a return on investment. For all these reasons, the State is very interested in this proposal and feels that it would be a good investment of State and Federal funding.

TABLE 2-1.1
PROJECTED COSTS AND REVENUES (7,500,000 Bushels Throughput)
Port of Montana's Grain Subterminal
Initial Cost of $2,700,000

REVENUES ATTRIBUTABLE	1983
1. 20¢/bushel for 7,500,000 bushels	$1,500,000
AVOIDABLE COSTS	
2. Non-variable, non-depreciable	$ 123,638
3. Variable Costs	126,098
4. Storage Costs avg 65% full @ 12%, $3.75 bu	146,250
5. Interest on Items 2 & 3 @ 12%, 6 months	14,984
6. Amortization of plant - 9% for 20 years	295,776
7. TOTAL AVOIDABLE COSTS (line 2 through 6)	$ 706,746
8. Avoidable loss from operations (line 1 minus line 7)	$(793,254)
9. Net liquidation value Assume 100% of construction costs	2,700,000
10. Rate of Return	17.7%
11. Opportunity Cost [(line 7 plus line 9) times line 10]	602,994
12. Total Avoidable Loss (line 8 plus line 11)	(190,260)
13. Net Profit (line 12/7,500,000)	2.5¢/bu

Parenthesis indicate gain

SOURCE: Montana Department of Commerce

TABLE 2-1.2
PROJECTED REVENUES AND COSTS (5,000,000 Bushels Throughput)
Port of Montana's Grain Subterminal
Initial Project Cost of $2,700,000

REVENUES ATTRIBUTABLE		
1.	20¢/bushel for 5,000,000 bushels	$1,000,000
AVOIDABLE COSTS		
2.	Non-variable, non-depreciable	$ 123,638
3.	Variable Costs	85,098
4.	Storage Costs Avg 35% full, 3.75/bu @ 12%	78,750
5.	Interest on lines 2 & 3 @ 12% for 6 months @ 12%	9,524
6.	Amortization of Plant - 9% for 20 years	295,776
7.	TOTAL AVOIDABLE COSTS (lines 2 through 6)	$ 592,786
8.	Avoidable Loss from Operations (line 1 minus line 7)	(407,214)
9.	Net Liquidation Value Assume 100% of construction costs out	2,700,000
10.	Rate of Return	17.7%
11.	Opportunity Cost [(line 7 plus line 9) times line 10]	582,823
12.	Total Avoidable Loss (line 8 plus line 11)	175,609
13.	Net Profit (line 12/5,000,000	-3.5¢/bu

Parenthesis indicate gain

SOURCE: Montana Department of Commerce

TABLE 2-1.3
HIGHWAY STATISTICS
Port of Montana's Grain Subterminal

TERMINAL	HIGHWAY	ORIGIN	MILES DEFICIENT	PERCENT DEFICIENT	LENGTH
I-90/I-15	I-90	East	0	0	471
Intersection	I-90	West	0	0	219
	I-15	North	3.8*	10	265
	I-15	South	0	0	130

* in design for near future construction

TABLE 2-1.4
PROJECT COST ESTIMATE
Port of Montana Grain Subterminal
1,400,000 bushel storage, steel storage bins
Designed by G.F.D., Inc., Minn, MN

Cost Item	Non-Participative	Participative Match	Participative Federal	Total
Land	$ 70,000			$ 70,000
Elevator Structure		$278,346	$ 649,473	927,819
Driveway Structure		64,500	150,500	215,000
Elevator Equipment		162,354	378,827	541,181
Electrical Systems		30,000	70,000	100,000
Dust Control		34,000	41,000	75,000
Aeration and Temperature Control		50,000	-0-	50,000
Rail Trackage and Design		147,000	343,000	490,000
Railcar Mover		30,000	70,000	100,000
Office	75,000			75,000
Engineering		16,800	39,200	56,000
	$145,000	$813,000	$1,742,000	$2,700,000

TABLE 2-1.4(a)
PROJECT COST ESTIMATE
Port of Montana Grain Subterminal
500,000 bushel storage, concrete storage bins
Designed by ACMP, Butte, MT

Cost Item	Non-Participative	Participative Match	Participative Federal	Total
Land	$ 70,000			$ 70,000
Elevator Structure		$ 400,000	$ 600,000	1,000,000
Driveway Structure		105,000	245,000	350,000
Elevator Equipment		147,717	232,283	380,000
Dust Control		22,500	52,500	75,000
Aeration and Temperature Controls		15,000	35,000	50,000
Electrical Systems		30,000	70,000	100,000
Railroad Trackage		197,000	293,000	490,000
Railcar Mover		30,000	70,000	100,000
Office	75,000			75,000
Contingencies		30,000	70,000	100,000
Engineering		31,807	74,217	106,024
	$145,000	$1,009,024	$1,742,000	$2,896,024

TABLE 2-1.5
PROJECT COST ESTIMATE
Port of Montana's Grain Subterminal
State of Montana's Investment Possibilities
1,400,000 bushel steel storage facility

COST ITEM		COST
Railroad Trackage		
(1) 7,100 linear feet of rail		
90# rail, 39' lengths = 213 tons @ $175/ton		$ 37,275
Laying rail @ $50,000 per mile		67,000
Material unloading $2,000 x 7,100/5,280		2,680
2 #9 turnouts @ $20,000 each		40,000
Surface and line rail $4,000 x 2 x 7,100/5,280		10,720
Build 2 road crossings @ $2,000 each		4,000
Ties $20 each x 4370		87,400
Ballast 12" x 15' x 7,100' = 4,000 yds @ $4 ea		16,000
OTM		
Joints 364 x $27.55		10,031
Plates 8740 x $2.75		24,035
Anchors 4 per rail x 364 x $1.15		1,674
Spikes 2 x 8740 x $.36		6,292
Bolts, washers, nuts 364 x 4 x $2.00		2,912
Original site grading, earth work		19,981
Subgrade preparation, shaping		160,000
	Subtotal	$490,000
Elevator Structure		
(2) 4 Steel Bin - 250,000 bu		$662,728
8 steel bin - 50,000 bu		265,091
	Subtotal	$927,819
Driveway Structure		
(2) Enclosed Driveways		$ 15,000
Elec. Oper'd Drs.		5,000
100' single lift truck dumper		115,000
60 ton scale		50,000
1,000 bushel rec. pit		30,000
	Subtotal	$215,000

(Table 2-1.5 Continued)

Elevator Equipment		
receiving legs	2-7,500 BPH	$ 150,000
conveyor systems	7,500 BPH	120,000
cleaner	8,000 BPH	60,000
distributor	14"	30,000
truck load-out	10,000 BPH	35,000
rail load-out	40,000 BPH	140,000
manlift	300#-3 station	6,181
	Subtotal	$ 541,181
Electrical Systems	systems	$ 100,000
Dust Control	system	$ 75,000
Aeration and Temp. Controls		
storage bins only		
3 cable temp. each bin	4 x 25HP fans	$ 50,000
Railcar Mover (Not Loco)	1	$ 100,000
Engineering		$ 56,000
Total Project Cost		$2,555,000

TABLE 2-1.6
PROJECTED STATISTICAL SUMMARY
Port of Montana's Grain Subterminal

Length of Rail: 7,100 feet

Number of Cars of Storage: 107 (65') long jumbo covered hoppers

Number of Bushels initially: 5,000,000 per year

Number of Carloads out: 1,550 per yr (31 trains)

Number of Trucks in: 3,500 per yr @ 1,450 bushels each
5,000 per yr @ 1,000 bushels each (present)

Carloads per mile: 1,169

Carloads per week: 29.8

Million Gross Ton-Miles per mile: 0.12

Total Project Cost: $2,700,000

State's participation (possible): $1,742,000
Expected Revenue: $1,000,000 initial year

TABLE 2-1.7
DISTRIBUTION OF BENEFITS
Port of Montana's Grain Subterminal

BENEFIT TYPE	DESCRIPTION	ESTIMATED BENEFITS
Railroad/truck transporters	Additional Revenue ($3,000/car)	$5,820,000
Farmer	5¢/bushel x twice the amount shipped	500,000
	Operation salaries, etc.	85,098
Terminal Operator	Revenue	575,000
Port of Montana	Salvage value	$ 70,000

SOURCE: Montana Department of Commerce (All revenues and costs presumed and not reflective of actual agreements)

TABLE 2-1.8
BENEFIT-COST ANALYSIS
Port of Montana's Grain Subterminal

		Present Value (1)			
ALTERNATIVE	PROJECT COST	BENEFITS	COSTS	NET	BENEFIT/COST RATIO
Build as Proposed	$2,700.0	$73,624.7	$13,118.6	$60,506.2	5.61

(1) Discount Rate - 4 percent
Project Life - 20 years
All dollar values represent thousands of dollars

SOURCE: Montana Department of Commerce

LEWISTOWN TO GERALDINE

Burlington Northern Railroad

The trackage from Geraldine to Denton comprises 41 miles of the 74 mile branchline from Lewistown to Geraldine. This section of railroad was initially analyzed as a part of Line Two in the 1979 State Rail Plan.

Milwaukee's line from Great Falls to Lewistown

This line was constructed by the Chicago, Milwaukee, St. Paul, and Pacific railroad at the turn of the century. In August of 1980, the BN purchased the section from Geraldine to Lewistown, and the Milwaukee took up the rail from Geraldine to Great Falls as well as from Moore to Judith Gap. Service to the BN mainline is now provided over the Moccasin to Spring Creek branchline for Lewistown, Heath, Moore, Geraldine and Denton.

Rail Use

From Geraldine to Denton, there are seven shippers and in 1982 these accounted for all of the revenue rail traffic between Geraldine and Spring Creek Junction. Denton historically generates approximately twice the traffic shipped by Geraldine. The only originating traffic is grain, while fertilizer and farm implements are the main terminating commodities.

Rail Service

Prior to an embargo of rail service placed February 17, 1983, and a slide that occurred on November 4, 1982, service was provided on Tuesday and Thursday at a timetable speed of 10 M.P.H.

The status and issues concerning this line are:

- There are five major structures (4 bridges and 1 tunnel) between Denton and Lewistown that all require repair.
- Some elevators are working together to get unit train rates.
- Major segments in poor condition due to tie and subgrade conditions.
- The highway between Geraldine and Denton currently carries a load limit restriction, is in very poor shape and needs to be rebuilt now, but the State Highway Department has no work scheduled for this highway for the next five years.
- A major slide at Arrow Creek that closed the line November 4, 1982, was finally repaired on February 16, 1983. The line was embargoed the very next day due to potential bridge stability problems. The line remains embargoed as this manual goes to printing.
- Truck competition exists, but over the past three years rail traffic has been steadily increasing, while trucking has decreased.
- There have been weight restrictions in force on the highway

from Fort Benton to Arrow Creek. The load limit has been reduced from 600 psi to 400 psi per inch of tire width. The soils in the area (clays and bentonite) swell and heave every spring. The Highway Department has to maintain this section every year because of this freeze-thaw action on the subgrade. Since no work is scheduled for at least the next five years, and with the deteriorated condition of the highway at present, heavy loading over the next few years will speed up the deterioration of the highway.

Estimated Revenues and Costs

The estimated revenues and costs of service for the Denton to Geraldine area are shown in Table 2-2.1. This service is based on continued operation via Moccasin, Spring Creek, and Amherst. In addition, Table 2-2.2 depicts the estimated revenue and cost of service for Denton and Geraldine based on constructing a new segment of rail from Dover to Arrow Creek. Finally, Table 2-2.3 shows the railroad's profit picture in 1982 without improvements.

Both options available require a heavy initial investment to lift the embargo and return the line to FRA class II operation. Because of these costs, both lines show a negative profit every year over a projected 10-year or 20-year life. However, operations in 1982 (depicted in Table 2-2.3) returned a profit. This was the last year of operation for the entire line.

Highways

Federal Aid Primary 80 parallels the line from Geraldine to Arrow Creek. From Arrow Creek to Denton, the rail line is paralleled by FAP 81. Due to load limits, traffic from Denton would travel south to Stanford and probably west to Great Falls where it could be transferred to rail or continue by truck all the way to Lewiston, Idaho, and put on a barge.

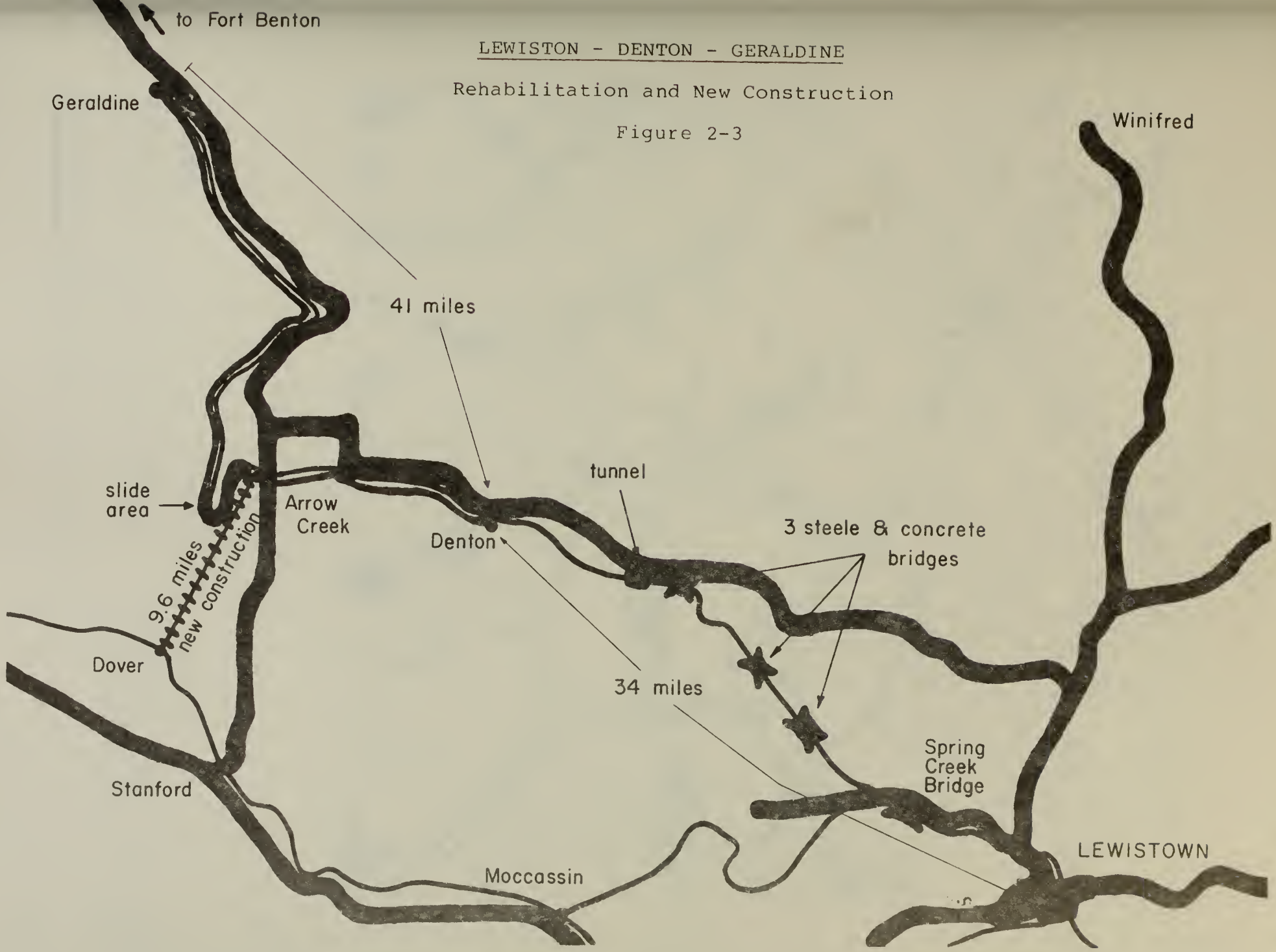
The shippers in Geraldine will have to ship north to Fort Benton. The initial indication is that the grain will stay on the trucks from Fort Benton to Great Falls, where it will be put into rail cars. There is also the possibility that the trucks will stop at Fort Benton's grain subterminal or continue onto Lewiston, Idaho.

From Fort Benton to Geraldine, (FAP 80), 50 percent of the road is over 20 years old. Present average daily traffic (ADT) is 419 vehicles of which 23 percent (95) is trucks. Putting all the grain from Geraldine onto the highway will add 3.2 trucks a day (1166 per year).

From Denton to Arrow Creek, (FAP 81), 32 percent of the road is over 20 years old. The ADT is 205 vehicles of which 23 percent (48) is trucks. The grain from Denton could add 2601 trucks per year, which would increase truck traffic by 7.1 trucks per day.

From Arrow Creek to Stanford, (FAP 80), ADT is 205 vehicles of which 24 percent (50) are trucks. Adding 7.1 trucks per day to this road increases truck traffic by 14.2 percent.

One-hundred percent of this section of highway is over 20 years old. A synopsis of the appropriate highway information is presented in Table 2-2.4.


to Fort Benton
LEWISTON - DENTON - GERALDINE
Rehabilitation and New Construction
Figure 2-3
Geraldine
Winifred
41 miles
slide area
Arrow Creek
tunnel
Denton
3 steele & concrete bridges
9.6 miles new construction
Dover
34 miles
Spring Creek Bridge
Stanford
LEWISTOWN
Moccassin

LEWISTOWN TO GERALDINE

Burlington Northern Railroad

0 5 10 30 40

One inch represents approximately 22 miles

LEGEND

- BN Lines in This Report
- All Other BN Lines
- Subject Line
- Proposed New Construction

LENGTH

Lewistown-Denton	33.1 miles
Denton-Geraldine	41.1 miles
Dover-Arrow Creek	9.6 miles

Figure 2-4

TABLE 2-2.1
ESTIMATED REVENUES AND COSTS
Spring Creek to Geraldine
Rail Service After 1983
Rehabilitation Costs of $22,078,569

		1982
REVENUES ATTRIBUTABLE		
1.	Freight originated and/or Terminated on Branch	$3,382,062
AVOIDABLE COSTS		
2.	On-branch costs (lines 2a through 2d).	$3,082,185
	a. Maintenance of Way and Structures (normalized)	268,595
	b. Transportation	362,050
	c. Freight Car Costs	32,910
	d. Amortizing $22,078,568 over 20 years @ 9%.	2,418,630
3.	Off-branch Costs	1,697,033
4.	TOTAL AVOIDABLE COSTS (line 2 plus line 3)	$4,779,218
5.	Avoidable loss from operations (line 1 minus line 4)	$1,397,156
6.	Net liquidation (line 6a plus line 6b)	794,602
	a. Materials	433,328
	b. Land	361,274
7.	Rate of Return	17.7%
8.	Opportunity Cost Foregone (line 6 plus line 2d times line 7)	568,742
9.	Total Avoidable Loss (line 5 plus line 8)	$1,965,898

SOURCE: Montana Department of Commerce

TABLE 2-2.2
ESTIMATED REVENUES AND COSTS
Denton to Geraldine with Dover to Arrow Creek Construction
Total Construction Costs of $16,250,442

REVENUES ATTRIBUTABLE		
1.	Freight Originated and/or Terminated on Branch	$3,382,062
AVOIDABLE COSTS		
2.	On-branch Costs (line 2a through 2d)	$2,273,081
	a. Maintenance of Way and Structures (normalized)	205,146
	b. Transportation	254,846
	c. Freight Car Costs	32,910
	d. Amortizing $16,250,442 over 20 years @ 9%	1,780,179
3.	Off-branch Costs	1,697,033
4.	TOTAL AVOIDABLE COSTS (line 2 plus line 3)	$3,970,114
5.	Avoidable loss from operations (line 1 minus line 4)	$ 588,052
6.	Net Liquidation (line 6a plus line 6b)	740,986
	a. Materials	585,948
	b. Land	155,038
7.	Rate of Return	17.7%
8.	Opportunity Cost Foregone (line 6 plus line 2d times line 7)	446,246
9.	Total Avoidable Loss (line 5 plus line 8)	$1,034,298

SOURCE: Montana Department of Commerce

TABLE 2-2.3
ESTIMATED REVENUES AND COSTS
Lewistown to Geraldine
Rail Service in 1982
No Rehabilitation Costs Included

REVENUES ATTRIBUTABLE	1982	
1. Freight originated and/or Terminated on branch	$3,382,062	
AVOIDABLE COSTS		
2. On-branch Costs (lines 2a through 2c)	797,039	
a. Maintenance of Way and Structures (normalized)	268,595	
b. Transportation	495,534	
c. Freight Car Costs	32,910	
3. Off-branch Costs	1,697,033	
4. TOTAL AVOIDABLE COSTS (line 2 plus line 3)	$2,494,072	
5. Avoidable loss from operations (line 1 minus line 4)	$ (887,990)	(1)
6. Net Liquidation (line 6a plus line 6b)	1,090,978	
a. Materials	862,710	
b. Land	228,268	
7. Rate of Return	17.7%	
8. Opportunity Cost Foregone (line 6 times line 7)	193,103	
9. Total Avoidable Loss (line 5 plus line 8)	$ (694,887)	(1)

(1) Parenthesis indicate gain

SOURCE: Montana Department of Commerce

TABLE 2-2.4
HIGHWAY ALTERNATIVES
Denton to Geraldine

Terminal	Alternate Station	Carrier	Highway Distance	ADT	Trucks	% of Shipments	Increase in Daily Trucks
Denton	JCT 191	BN	29	210	50	20	1.4
	Lewistown, MT	BN	9	1220	40	20	1.4
(2601 trucks/ year)	Stanford	BN	30	440	50	80	5.7
	Great Falls	BN	90	1830	290	60	2.1
	Lewiston,ID	Barge	478	720	130	30	1.1
Geraldine	Fort Benton	BN	27	520	170	100	3.2
(1166 trucks/ year)	Great Falls	BN	67	1400	290	85	2.7
	Lewiston, ID	Barge	388	720	130	15	0.5

Terminal	Highway	Destination	Old	Deficient	Deficient	Length
Denton	MT 81	Lewistown	32%	39.3%	11.04	29
	FAP 191	Lewistown	72%	33%	2.09	9
	MT 81	Arrow Creek	100%	35.8%	4.65	13
	MT 80	Stanford	82%	37.1%	6.31	17
	MT 87	Great Falls	89%	36%	21.04	60
	MT 200	Missoula	88.4%	54%	90.03	168
	U.S. 12	ID border	-0-	36.1%	10.01	28
	U.S. 12	Lewistown	---	---	---	192
Geraldine	MT 80	Fort Benton	49%	32%	8.62	27
	MT 87	Great Falls	50%	27.2%	10.86	40
	MT 200	Missoula	88.4%	54%	90.03	168
	U.S. 12	ID border	-0-	36.1%	10.01	28
	U.S. 12	Lewiston, ID	---	---	---	192

SOURCES: 1981 Montana Primary Highway Sufficiency Ratings
1981 Montana Traffic by Sections

Rail Inventory and Condition

The inspection results of this branchline are detailed in Table 2-2.5. The line is constructed of lightweight rail with old ties on ballast that consists of pit run gravel that hasn't been surfaced in 40 years. However, the track condition itself is not the major concern. Between Lewistown and Denton, there is a wooden trestle at Spring Creek that will need to be replaced (at a cost of $3,030,000), 3 trestles that need to be stabilized and redecked ($3,200,000) and a tunnel that needs drainage work ($126,000). In addition, the rail, ties and surfacing will cost $6,042,824 for the section between Lewistown and Denton. To avoid the $12,398,824 cost from Lewistown to Denton, the State is looking at a new construction project of 9.6 miles from Dover to Arrow Creek.

From Geraldine to Denton, there are no major trestles or tunnels, but there is a slide area at Arrow Creek. It is estimated that it will cost $2,000,000 to stabilize this slide for the long term. In addition, the rail is light weight and would require $7,679,744 to rehabilitate. Overall, this line segment is in fair condition. If the rail, ties, ballast and surfacing were the only concerns, the carrier could maintain 10 mph service at least for the near future. Problems with the Spring Creek Bridge (the wooden trestle referred to above) and other steel trestles on the line that have been moving and are responsible for the present embargo require that a decision be made quickly. Is the line to be rehabilitated or will the carrier be allowed to abandon it?

TABLE 2-2.5
CURRENT FACILITIES INVENTORY
Lewistown to Geraldine

Mileposts - 61.8 to 136.3, a total of 74.5 miles (including 1.2 miles of yard track)

Rail - Approximately 12.3 miles of 100 lb. rail. Eight miles of this is in Lewistown and directly north of Lewistown. The remainder is intermingled with the 75 lb. rail for the curves and soft spots in the Arrow Creek Hill area. From mile post 106.6 to 136.3, the remaining rail is all 75 lb. rolled in 1913. All joint bars are 24", with 4 holes. No bolts were noted as missing and no cracked angle bars were spotted.

Ties - Treated hardwoods installed in the 1930's to 1940's. In problem areas such as curves, slides, and soft spots, new pine ties have recently been installed.

Tie Plates and Rail Anchors - All ties are plated with single shoulder tie plates that are 7" by 9½". The anchor pattern is very sporadic. Many rails have no anchors, while the most seen was 4 per rail. About a third of the anchors are ineffective because they are separated from the ties.

Ballast - Fouled river run gravel. From mile post 106.6 north, for 4 miles, there are scattered areas where ballast has been unloaded heavily at slide and washout sites.

Bridges - There are 33 smaller wooden bridges on the line, which have a total length of approximately 2,640 linear feet. This is in addition to the 3 steel and concrete trestles and the one wooden trestle that are from 1302 to 1954 feet long and from 85 to 158 feet high.

Road Crossings - There are 34 road crossings; 10 are paved and 24 are unpaved. (From Denton to Geraldine, there are 11 unpaved and 1 paved)

Roadbed - There are some major roadbed problems - one is in the Sage Creek tunnel. Between Denton and Lewistown, there is a lot of icing that occurs in this tunnel during the winter due to poor drainage. An overhead spring causes problems with sliding clay subgrade. There is no ballast on top of the clay. In addition, Arrow Creek Hill has a number of slide problems. From Arrow Creek to Geraldine, there are about five unstable fills that need annual maintenance.

Vegetation - Track generally clear. In the right of way, growth is cut or controlled.

Timetable Speed - 10 mph.

Net Liquidation - Geraldine to Denton $125,624 (land)
$474,780 (materials)
Denton to Lewistown $102,644 (land)
$387,930 (materials)

SOURCE: Montana Department of Commerce
Burlington Northern Railroad
Railway Line Clearance, Vol. 191, 1981

Rehabilitation Costs

Because of the above mentioned concerns (lightweight rail, broken ties, poor surfacing, and 9.6 miles of new construction), the costs of maintaining service to Denton and Geraldine is relatively high, as detailed in Table 2-2.6 through Table 2-2.8. The estimated minimum total cost is approximately $16.25 million. This work would stabilize the line for long-term, efficient rail service.

Effects of Abandonment

Railroad - The rail, plates, and anchors on this line would be sold for scrap because of their light weight. The ties would also be sold as scrap if possible. However, over half of these ties were put in during the 1930's. Based on the revenue/cost information presented earlier in Tables 2-2.3, the railroad would save on-branch costs of approximately $797,039 per year without the line. Although the line was profitable in 1982, the rehabilitation costs and associated interest costs will cause the railroad to lose money on this line if the required rehabilitation were done at total railroad expense.

Rail Users - Without this branchline, the shippers will have to move more ton-miles by truck than they have in the past. It remains to be seen if the grain will ever actually go on Montana rails or move to Lewiston, Idaho, and be barged down the Columbia River. There is a possibility that Fort Benton, Lewistown, Great

Falls, Stanford, and Moccasin will see an increase in agricultural marketing if this line were to be abandoned.

TABLE 2-2.6
REHABILITATION COST ESTIMATE
Lewistown to Geraldine
74.5 miles

COST ITEM	COST
1. Relay 90# rail for 74.5 miles (33' lengths) 158.4 tons/mile @ $175/ton X 74.5 miles	$2,065,140
2. Joints 90# S.H. (320/mile x 74.5 x $27.55)	656,792
3. Bolts, washers and nuts (4 x 350 x 74.5 x $2)	208,600
4. Tie plates (6,000/mile x 74.5 miles x $2.75)	1,229,250
5. Spikes, new (12,000/mile x 74.5 x $.36)	321,840
6. Anchors, new 16 per rail = (5,120 x 74.5 x $1.15)	438,656
7. Turnouts, #9's 20@ $20,000 each	400,000
8. Ballast 75,000 yards @ $4.00 per yard	300,000
9. Lay rail 74.5 miles @ $50,000 per mile	3,725,000
10. Unload materials 74.5 x $2,000	149,000
11. Surface and line rail 74.5 x $4,000	298,000
12. Work road crossings 34 @ $2000 each	68,000
13. Ties 1250/mile @ $40 each x 74.5 miles	3,725,000
14. Stabilize 3 trestles, 1016, 1018 and 1020	3,200,000
15. Replace Spring Creek bridge	3,030,000
16. Daylight Sage Creek tunnel	126,000
17. Ditching, stabilizing embankment, Arrow Creek	2,675,000
Subtotal	$22,616,278
18. Bridge work	325,000
19. Less salvage of 75# rail, plates and anchors	(862,710)
20. Total rehabilitation cost	$22,078,568

SOURCE: Montana Department of Commerce

NOTE: Included in the analysis of the Lewistown to Moore to Sipple connection discussed next in this chapter is the rehabilitation of the 9.2 miles of rail from Lewistown to Spring Creek and rebuilding of Spring Creek Bridge. Since that work is addressed there, we will look at this (Lewistown to Geraldine) project without the cost of the Lewistown to Spring Creek items. Project costs for a Spring Creek to Geraldine project would be ($17,477,476). This number is derived by totalling the first 13 items in Table 2-2.6 and multiplying that number by [(74.5 - 9.2)/74.5)]. Then add the costs for items 14,16, and 17 and subtracting [(74.5 - 9.2)/74.5) X line 18]. The length of the line from Lewistown to Spring Creek Junction is 9.2 miles.

Since $17,477,476 is higher than the estimate for the suggested project of rebuilding Denton to Geraldine and building Dover to Arrow Creek, ($16,250,442), that option will not be pursued any further.

TABLE 2-2.7
REHABILITATION COST ESTIMATE
Denton to Geraldine
41 miles

COST ITEM	COST
Relay 90# rail $175/ton 41 x 158.4 (33' lengths)	$ 1,136,520
Replace ties 1250 x 41 x $40	2,050,000
Joints 320/mile x 41 x $27.55 each	361,456
Nuts and bolts 1280 x 41 x $2.00	104,960
Plates 7,040 x 41 x $2.75	793,760
Spikes 14,080 x 41 x $.36	207,820
Anchors 5120 x 41 x $1.15	241,408
6" of ballast x 900 cu. yds./mile x 41 x $4/yd.	147,600
Turnouts 5 #9's @ $20,000 each	100,000
Lay rail 41 x $50,000	2,050,000
Unload materials 41 x $2000	82,000
Surface and line and smooth rail 41 x $4000	164,000
Install 8 drain pipes 8 x $2000	16,000
Rebuild road crossings 12 x $2000	24,000
Stabilize Arrow Creek Slide	2,000,000
Ditching and Stabilizing	225,000
Engineering (of Arrow Creek slide)	450,000
Subtotal	$10,154,524
Less salvage of 75# rail, plates, and ties	474,780
Total Rehabilitation Cost	$9,679,744

SOURCE: Montana Department of Commerce

TABLE 2-2.8
NEW CONSTRUCTION COST ESTIMATE
Dover to Arrow Creek
9.6 Miles

COST ITEM	
Land or Easement Cost - 9.6 Miles x 100' x 5280/43,560 X $4,000	$465,455
Engineering	150,000
Surveying	140,000
Preparation of initial subgrade $10,000 per mile	96,000
Relay 90# rail, 158.4 tons/mile x 9.6 x $175/ton	266,112
Ties 22/rail x $40 each x 5280/33 x 9.6	1,351,680
Joints (320 x 9.6 x $27.55)	84,634
Nuts and bolts, New (320 x 4 x 9.6 x $2.00)	24,576
Tie plates, S.H. 7,040 x 9.6 x $2.75	185,856
Spikes (14,080 x 9.6 x $.36)	48,660
Anchors 16 per rail (5120 x 9.6 x $1.15)	56,525
24" of ballast X 4000 cu. yds./mile x 9.6 x $4/yd.	153,600
Turnouts 3 @ $20,000 each (#9's)	60,000
Unloaded materials 9.6 x $2000	19,200
Lay rail $50,000 x 9.6	480,000
Surfacing $4000 x 9.6	38,400
8 drains @ $2000 each	16,000
Construct 11 road crossings at $4,000 each	44,000
Ditching and Embankment work	200,000
Grading	250,000
Crowned roadway	800,000
Cut and fill work	280,000
Subgrade	1,360,000
Total Rehabilitation Cost	$ 6,570,698

SOURCE: Montana Department of Commerce

Cost of Current Transportation Alternative

The estimated truck costs due to lost service are $513,000 per year based on 1982 rates, while barge costs are approximately $100,000 per year.

Energy

Since an abandonment would generate a total of 3767 additional truck trips per year with a minimum haul of 27 miles from Geraldine and 38 miles from Denton, the minimum additional fuel usage is estimated to be 396,000 gallons per year.

Alternatives Evaluated

There are three possible alternatives to this situation: abandonment, rehabilitation and maintenance of existing plant, and rehabilitation from Denton to Geraldine with new construction from Dover to Arrow Creek and abandonment of Lewistown to Denton.

Rehabilitation and Maintenance of Existing Plant

Due to the high cost of maintaining the existing plant this option is discarded (see Table 2-2.6).

Rehabilitation and New Construction

As detailed earlier, this option will cost about $16.25 million. The present value of project benefits is the net change in transportation costs to the shipper that may occur if the line is abandoned. The benefits expected over 20 years will exceed the costs resulting in a benefit to cost ratio of 1.11.

Conclusion

The benefit/cost ratio of a potential project in this area is shown to be slightly greater than one. The communities and the shippers involved would be greatly impacted with the loss of their towns and homes, a very real possibility. Consider further the impact on the area highway system. Without rail, the almost non-existent roadway system would be reduced to impasse in a very short period. This comes at a time when public highway dollars are scarce. Highway reconstruction costs for this area grossly exceed the cost of rail rehabilitation. Community impacts were not calculated as part of the benefit/cost evaluation in Table 2-2.9. If we consider community income loss alone, an additional $1,554,000 loss would be prevented if the railroad were not to abandon the line (Table 2-2.12). If these impacts were considered in the benefit/cost analysis, the ratio would increase to 1.56. Therefore, it is highly recommended that rail rehabilitation be considered as a possible future project. As a light density line, this project is eligible for Federal assistance.

TABLE 2-2.9
DISTRIBUTION OF BENEFITS
Geraldine to Denton

BENEFIT TYPE	DESCRIPTION	ESTIMATED BENEFIT
	Rehabilitation & New Construction	
Railroad	Annual cost savings, on branch	$2,273,081
	Annual cost savings, off branch	-0-
Truck/User	Annual line haul & handling cost	513,240
Barge/user	Annual cost 100,000	
Other	Net salvage value of rail, ties, etc.$	507,528

SOURCE: Montana Department of Commerce

TABLE 2-2.10
BENEFIT-COST ANALYSIS
Geraldine to Denton

ALTERNATIVE	PROJECT COST	PRESENT VALUE (1) Benefit	Cost	Net	BENEFIT/COST RATIO
Rehabilitation & New Construction	$16,250	$51,402.0	$46,105.0	$5,297.0	1.11

(1) Discount Rate - 4 percent
Project Life - 20 years
All monetary figures represent thousands of dollars (000's)

SOURCE: Montana Department of Commerce

TABLE 2-2.11
RAILROAD USE STATISTICS 1982
Denton to Geraldine

	CARLOADS		TONS		
STATION	Number	Percent	Number	Percent	COMMODITY
		Originating			
Geraldine	323	26.5%	29,966	26.4%	Farm Products
Denton	836	68.5%	78,399	69.1	Farm Products
	1159	95.0%	108,365	95.5%	
		Terminating			
Geraldine	44	3.6%	4,140	3.6%	Fertilizer
Denton	18	1 4%	1,013	0.9%	Farm Products
	62	5.0%	5,153	4.5%	
Total	1221	100%	113,518	100%	

Statistical Summary for 1982:

Length of line:

Geraldine to Denton 41.0 miles

Denton to Lewistown 33.5 miles

Dover to Arrow Creek 9.6 miles

Million Gross Ton-Miles per Mile: 0.228

Carloads per week 25.0

Carloads per mile 17.4

Revenue $3,382,000

SOURCE: Montana Department of Commerce

TABLE 2-2.12
Projected Income Loss Associated with
Abandonment of the Lewistown/Geraldine Branchline

	Pre-Embargo 1982	Present 1983	Anticipated 1985	Expected Income Loss
Chouteau County				
Geraldine				
Railroad	$123,000	$ 30,000	0	-$123,000
Grain elevators	105,000	105,000	$55,000	-50,000
Subtotal				-$173,000
Fergus County/Denton				
Railroad	$245,000	$ 30,000	0	-$245,000
Grain elevators	227,000	227,000	0	- 227,000
Implement dealership	150,000	150,000	0	- 150,000
Subtotal				-$662,000
Judith Basin/Stanford				
Not directly affected	0	0	0	0
Direct Income Total				-$795,000
Secondary Sector/Government:				
Allocated to Chouteau/Geraldine				$ 91,000
Allocated to Fergus/Denton				668,000
Allocated to Judith Basin/Stanford				0
Total Support Sector Income				$ 759,000
GRAND TOTAL				$1,554,000

Source: Mountain International Inc.

LEWISTOWN TO MOORE TO SIPPLE

Burlington Northern Railroad

This proposed project consists of rehabilitating 17.6 miles of track from Lewistown to Moore, rebuilding the trackage from Moore to Sipple (about 5.4 miles) and building a completely new connection from Sipple to the BN mainline, a distance of about 1.0 miles.

This trackage was originally owned by the Chicago, Milwaukee and St. Paul Railroad. The Lewistown-Moore section was purchased in 1980 by the BN. The remainder of the trackage, from Moore south to Judith Gap was removed by the Milwaukee. At Sipple, there is only about a mile that separates the BN mainline from the old Milwaukee trackage.

This project has been proposed by the carrier to allow abandonment of the 21.5 mile connection from Moccasin to Spring Creek. The section from Moccasin to Spring Creek is in need of repair, but if the carrier is also able to abandon Spring Creek to Geraldine (refer to the second analysis in this chapter) it would be able to terminate operation over the Spring Creek bridge (a 50 year old wooden structure that is 85 feet high and 1392 feet long) and the 9.2 miles of trackage from Lewistown to Spring Creek Junction. This work from Spring Creek to Lewistown was considered in the Denton to Geraldine discussion earlier in this chapter but because the proposed Dover to Arrow Creek connection proved to be a less expensive alternative, the Lewistown to Spring Creek Junction work would not be done under that project.

Therefore, those costs would have to be included in the analysis of this alternative, along with rehabilitating the rail from Lewistown to Spring Creek to Moccasin and replacing the Spring Creek bridge.

All the rail discussed in this analysis was examined as a part of Line Two in the 1979 State Rail Plan. At that time, the Milwaukee was still operating over the lines. In August, 1980, the lines from Moore to Lewistown, from Heath to Lewistown, and from Geraldine to Lewistown were purchased by BN.

Rail Use

There are three shippers on the Moore to Lewistown line, one on the Heath to Lewistown line, and nine shippers in Lewistown that will be affected by any change in service. In addition, the users on the Geraldine to Lewistown line have an obvious interest in this project. This makes a total of 20 shippers that are currently using rail service. These shippers were all contacted by letter, by a survey questionnaire, and in person. In addition, many prospective shippers were contacted to check on the possibility of a growth in rail usage. The number of rail cars shipped to or from Lewistown, Moore and Heath were 705 in 1980 and 1,049 in 1982.

Rail Service

Service on this line is provided 1 or 2 times a week from Lewistown at a timetable speed of 25 mph.

The status and issues concerning this project are:

- The Spring Creek bridge is a wooden trestle over 50 years old. When this bridge was built, the state of the art did not contemplate the use of unit trains comprised of 26 or 52 100 ton cars which are the norm today. BN claims that continued safe operation over this bridge for the long term cannot be expected, and the proposed alternative would provide a good Class II line without building a new major trestle at Spring Creek. An analysis of a project rehabilitating the line from Moccasin to Lewistown with a new trestle at Spring Creek will not be pursued.
- This is a light density line not presently subject to abandonment. However, due to the age of the Spring Creek Bridge and the cost of replacement for this structure, abandonment or the proposed alternative looks to be the viable options for the near future.
- Truck competition is very prevalent in Moore because the Moccasin grain subterminal is only 13 miles away. However, in Lewistown the only elevators using trucks do so because they cannot handle unit trains or are shipping only small quantities and cannot justify single car loadings.

Estimated Revenues and Costs

The estimated revenues and costs for the Lewistown-Moore-

Sipple project are shown in Table 2-3.1. Table 2-3.2 shows revenues and costs from the line as serviced through Moccasin and Spring Creek, without any rehabilitation.

Highways

The appropriate highway information is summarized in Table 2-3.3. The transfer from rail to truck caused by an abandonment would not drastically affect the highway system because the area roads analyzed here are currently in reasonable shape. However, the transfer from rails would have definite long-term effects on the highway, accelerating this deterioration and forcing redesign and reconstruction. FAP 87 parallels the subject line from Lewistown to Moore, then continues to Moccasin where a unit train facility exists. This unit elevator is on Burlington Northern's main line and would not be adversely affected by an abandonment. It is expected that this elevator will absorb 40 percent of Moore's shipments and 15 percent of Lewistown's shipments if the Moore-Lewistown line were abandoned.

TABLE 2-3.1
ESTIMATED REVENUES & COSTS
Lewistown to Moore to Sipple
Total Construction Costs of $4,513,276

REVENUES ATTRIBUTABLE		
1.	Freight Originated and/or Terminated on Branch	$2,038,060
AVOIDABLE COSTS		
2.	On-branch Costs (Lines 2a through 2d)	840,878
	a. Maintenance of Way and Structures (Normalized)	173,784
	b. Transportation	101,054
	c. Freight Car Costs	71,626
	d. Amortizing $4,513,276 @ 9% for 20 years	494,414
3.	Off-branch Costs	1,188,424
4.	TOTAL AVOIDABLE COSTS (line 2 plus line 3)	$2,029,302
5.	Avoidable Loss From Operations (line 1 minus line 4)	$ (8,758)
6.	Net Liquidation (line 6a plus line 6b)	1,500,603
	a. Materials	533,870
	b. Land	966,733
7.	Rate of Return	17.7%
8.	Opportunity Cost Foregone (line 6 plus line 2d x line 7)	353,118
9.	Total Avoidable Loss (line 5 plus line 8)	$(344,360)

(1) Parenthesis indicate gain

SOURCE: Montana Department of Commerce

TABLE 2-3.2
ESTIMATED REVENUES AND COSTS
Serving Lewistown and Moore Via Moccasin
and Spring Creek Junction
No Construction or Rehabilitation Included

REVENUES ATTRIBUTABLE			
1.	Freight Originated and/or Terminated on Branch	$2,038,060	
AVOIDABLE COSTS			
2.	On-branch Costs (Lines 2a through 2c)	$ 346,464	
	a) Maintenance of Way and Structures (Normalized)	173,784	
	b) Transportation	101,054	
	c) Freight Car Costs	71,626	
3.	Off-Branch Costs	1,188,424	
4.	TOTAL AVOIDABLE COSTS (line 2 plus line 3)	$1,534,888	
5.	Avoidable Loss From Operations (line 1 minus line 4)	(503,172)	
6.	Net Liquidation (line 6a plus line 6b)	1,711,351	
	a) Materials	540,559	
	b) Land	1,170,792	
7.	Rate of Return	17.7%	
8.	Opportunity Cost Foregone (Line 6 times line 7)	302,909	
9.	Total Avoidable Loss (line 5 plus line 8)	$ (200,263)	(1)

(1) Parenthesis indicate gain

SOURCE: Montana Department of Commerce

TABLE 2-3.3
HIGHWAY ALTERNATIVES
Moore and Lewistown

Terminal	Alternate Station	Carrier	Highway Distance	ADT	Trucks	% of Shipments	Increase in Daily Trucks
Moore (270 trucks)	Moccasin	BN	13 miles	1550	280	100%	3.7%
	Great Falls	BN	91	2000	360	60%	2.2%
	Lewiston, ID	Barge	479	720	130	20%	0.7%
Lewis-town (2887 trucks)	Moccasin/ Stanford	BN	27	1550	280	100%	7.9%
	Great Falls	BN	105	2000	360	85%	6.7%
	Lewiston, ID	Barge	493	720	130	25%	2.0%

Terminal	Highway	Destination	% over 20 yrs. old	% Deficient	Miles Deficient	Total Length
Moore	MT 87	Moccasin	8%	25%	3.3	13
		Great Falls	89%	36%	28.0	78
	MT 200	Missoula	88.4%	54%	90.3	168
	U.S. 12	Idaho Border	-0-	36%	10.1	28
		Lewiston, ID	-0-	-0-	-0-	192
Lewistown	MT 87	Moccasin	55%	32%	8.54	27
		Great Falls	89%	36%	28.0	78
		Missoula	88%	34%	90.3	168
		Idaho Border	-0-	36%	10.1	28
		Lewiston, ID	-0-	-0-	-0-	192

SOURCES: 1981 Montana Primary Sufficiency Ratings
1982 Montana Traffic by Sections

Rail Inventory and Conditions

The inspection results of the branchlines from Lewistown to Moore are detailed in Table 2-3.4. The majority of the line now in place is constructed of good 90 lb. rail. The line and surface of the track is relatively fair, but ballasting and surfacing are suggested, as well as a tie renewal program to replace the defective ties between Moore and Lewistown.

Construction Costs

Rehabilitating the line from Moore to Lewistown will be relatively inexpensive because of the good condition of the existing rail. However, the new construction from Moore to Sipple to the mainline, though only 6.4 miles, will cost $2,701,844. The total project cost of $4,513,276. This work would certainly improve service to Lewistown and Moore, cut down the required trackage, get rid of the concern with the Spring Creek Bridge and cut down yearly maintenance.

Rehabilitation and construction costs for this project are detailed in Table 2-3.5 and 2-3.6.

Effects of Abandonment

Railroad

If the railroad were to abandon Lewistown and Moore, it would be losing money as shown in Table 2-3.2. However, the problem of the Spring Creek Bridge must be addressed in the near future. At this

time, the carrier cannot justify any project because of the high cost of the alternatives. As a result, abandonment of the line would be costly, but rehabilitation of the line would be even more costly.

Rail Users

Without this branchline, the shippers would all use truck to some degree. It is estimated that only 40 percent of the shipments from Moore (1160 tons) and 15 percent of the tonnage from Lewistown (1815 tons) would be routed to the nearest grain subterminal (Moccasin) or team dock (Stanford). This is only 2975 tons of the 88520 presently shipped, or 3.4 percent. The estimated increase in the cost of service is $451,371 in 1982, all of which will go to truck and barge costs.

Energy

It is anticipated that the abandonment of this line will result in a significant increase in the consumption of fuel. Once the grain is loaded onto a truck in Lewistown, it is expected that the vehicle used will be a large grain truck rather than a small farm truck. The cost structure at this time indicates the truck will probably go at least to Great Falls and may continue on to Lewiston, Idaho. The increase in fuel usage is estimated to be 453,000 additional gallons.

Alternatives Evaluated

Rehabilitation of Moccasin to Spring Creek would require rebuilding 30.7 miles of track and a bridge over Spring Creek. The new bridge alone is estimated to cost $3,030,000. An analysis of this alternative is not included in this Supplement.

Burlington Northern Railroad

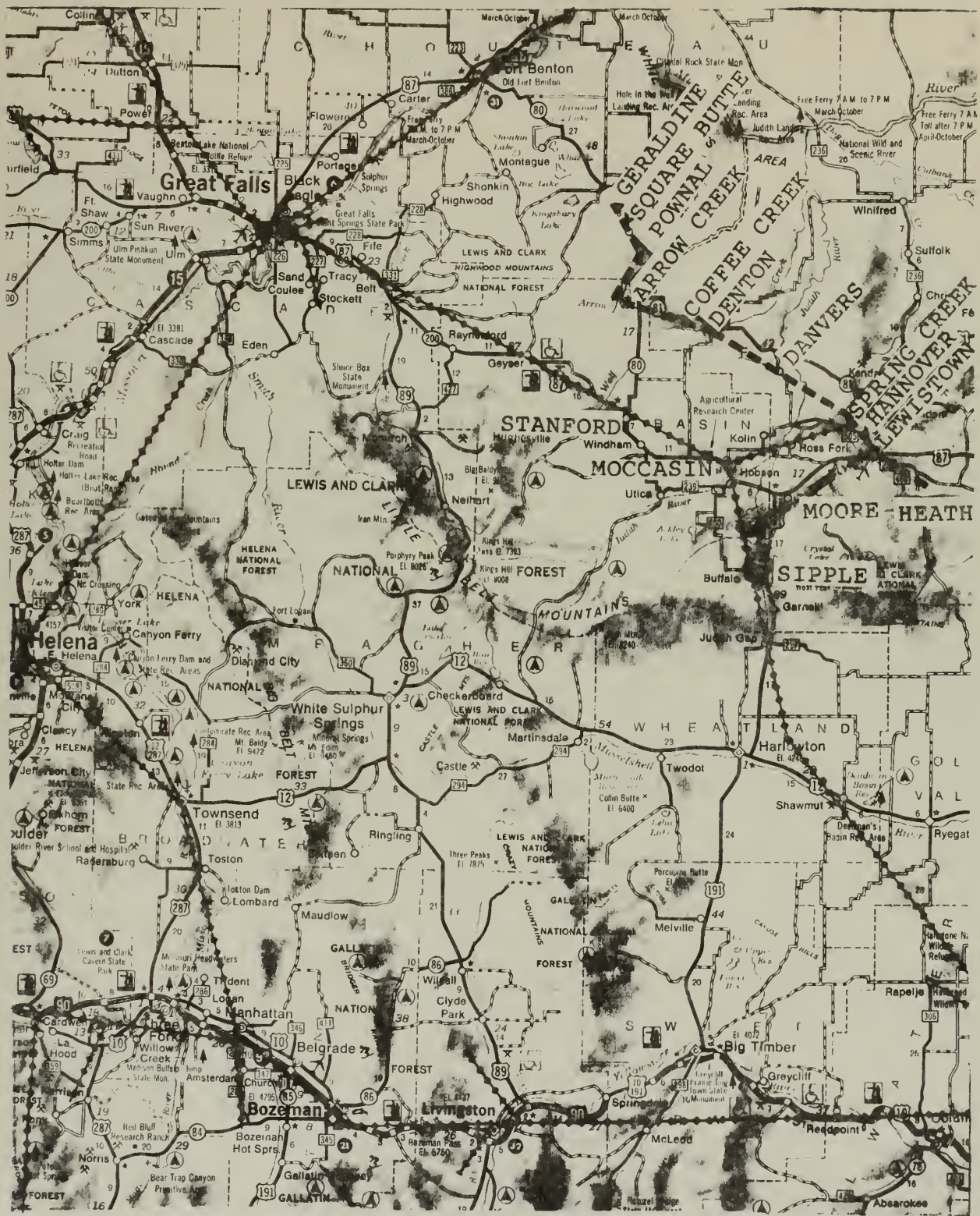

Great Falls
Helena
Cascade
Townsend
Boulder
Raynesford
Geyser
STANFORD
MOCCASIN
Judith Gap
SIPPLE
MOORE
HEATH
Harlowton
Twodot
Shawmut
Ryegate
Melville
Big Timber
Greycliff
Reedpoint
Absarokee
McLeod
Livingston
Bozeman
Belgrade
Manhattan
Three Forks
Logan
Willow Creek
Amsterdam
Norris
Ringling
Maudlow
Toston
Raderaburg
Lombard
Checkerboard
Martinsdale
Castle
White Sulphur Springs
Diamond City
Canyon Ferry
York
Neihart
Monarch
Eden
Cascade
Simms
Sun River
Vaughn
Ft. Shaw
Dutton
Power
Fort Benton
Old Fort Benton
Carter
Highwood
Shonkin
Montague
Portage
Black Eagle
Sand Coulee
Tracy
Belt
Stockett
Fife
Windham
Kolin
Ross Fork
Hobson
Utica
Buffalo
Garneill
Winifred
Suffolk
Chinook
Havre
Malta
Glasgow
Wolf Point
Scobey
Plentywood
Sidney
Glendive
Miles City
Billings
Laurel
Columbus
Livingston
Gardiner
Yellowstone Nat'l Park
Red Lodge
Cooke City
Silver Gate
Cody
Powell
Lovell
Basin
Thermopolis
Worland
Greybull
Shoshoni
Riverton
Lander
Dubois
Jackson
Pinedale
Big Piney
Kemmerer
Evanston
Rock Springs
Green River
Wamsutter
Rawlins
Saratoga
Encampment
Walcott
Medicine Bow
Hanna
Elk Mountain
Arlington
Laramie
Cheyenne
Wheatland
Torrington
Lingle
Guernsey
Fort Laramie
Scottsbluff
Gering
Bridgeport
Alliance
Hemingford
Crawford
Chadron
Rushville
Gordon
Valentine
Merriman
Ainsworth
Long Pine
Bassett
Newport
Hay Springs
Gordon
Rushville
Harrison
Crawford
Chadron
Hot Springs
Edgemont
Oelrichs
Chamberlain
Pierre
Fort Pierre
Oahe Dam
Mobridge
Aberdeen
Watertown
Sisseton
Wahpeton
Fargo
Grand Forks
Devils Lake
Rugby
Minot
Williston
Watford City
Killdeer
Dunn Center
Beulah
Hazen
Stanton
Washburn
Bismarck
Mandan
Flasher
Carson
Glen Ullin
New Salem
Hebron
Richardton
Dickinson
Belfield
Medora
Sentinel Butte
Beach
Glendive
Terry
Fallon
Baker
Ismay
Plevna
Forsyth
Rosebud
Hysham
Custer
Hardin
Crow Agency
Lodge Grass
Wyola
Sheridan
Dayton
Ranchester
Story
Big Horn
Parkman
Banner
Clearmont
Buffalo
Kaycee
Mayoworth
Barnum
Casper
Mills
Evansville
Bessemer Bend
Glenrock
Douglas
Orin
Wheatland
Chugwater
Cheyenne
Pine Bluffs
Sidney
Kimball
Bushnell
Potter
Dix
Chappell
Big Spring
Ogallala
Paxton
North Platte
Sutherland
Hershey
Wallace
Sumner
Elsworth
Arnold
Broken Bow
Ansley
Litchfield
Loup City
Ord
Scotia
Greeley
Spalding
Fullerton
Albion
Cedar Rapids
Genoa
Columbus
Schuyler
Fremont
Omaha
Council Bluffs
Nebraska City
Falls City
Auburn
Tecumseh
Beatrice
Wymore
Blue Springs
Hebron
Fairbury
Hastings
Kearney
Gibbon
Shelton
Wood River
Grand Island
Central City
Aurora
York
Seward
Milford
Crete
Lincoln
Weeping Water
Plattsmouth
Bellevue
Papillion
Gretna
Ashland
Wahoo
Yutan
Fremont
Blair
Tekamah
Decatur
Lyons
Oakland
Pender
Wayne
Norfolk
Madison
Battle Creek
Pierce
Plainview
Wisner
Winside
Hoskins
Laurel
Coleridge
Wakefield
Allen
Dixon
Concord
Hartington
Crofton
Niobrara
Verdigre
Creighton
Pierce

TABLE 2-3.4
REHABILITATION COST ESTIMATE
Lewistown to Moore
17.6 Miles

COST ITEM	COST
Relay 90# Rail (12.6 miles in now) 5 x 158.4 x $175	$138,600
Joints 90# S.H. (350/mile x 5.0 x $27.55)	48,212
Bolts, Washers, Nuts, New (4 X 350 x 5 x $2)	14,000
Tie Plates, S.H. (6000/mile x 5.0 x $2.75)	82,500
Spikes, New (12,000/mile x 5.0 x 0.36)	21,600
Anchors, New (16/rail) (2560 x 5.0 x 1.15)	14,720
Ballast 1300 yards/mile x $4/yd x 17.6	91,520
Replace 8 ties/rail or 1280/mile x $40 x 17.6	901,120
Surface and line and smooth rail $4000 x 17.6 X 2	140,800
Unload Materials $2000 X 5.0	10,000
Lay Rail 5.0 x $50,000/mile	250,000
Turnouts 4 #9's @ $20,000 each	80,000
Rework 5 bridges	40,000
Rework 8 road crossings @ $4000 each	32,000
Subtotal	$1,865,072
Less Salvage of 75# rail anchors, plates for 5.0 miles - (670.5 Tons x $80)	(53,640)
Total Cost of Rehabilitation	$1,811,432

SOURCE: Montana Department of Commerce

TABLE 2-3.5
PROJECT COST ESTIMATE
Build Moore to Sipple to the Mainline
(Rebuilding 5.4 miles and New Construction of 1.0 miles)

COST ITEM	COST
Lay 90# panels @ $52/foot x (6.4 miles X 5,280)	$1,757,184
12" of ballast - 1950 x 6.4 x $4	49,920
Surface and line and smooth - 2 x $4000 x 6.4	51,200
Build 3 turnouts (#9's) @ $20,000 ea.	60,000
Rework 4 bridges and build 1 new one 30' long	356,000
Build 6 road crossings	24,000
Move powerlines	20,000
Land cost @ $2000/acre, 100' wide	155,150
4 culverts @$2000 each	8,000
Building roadway to subgrade	380,000
Engineering	75,000
Total Cost, new construction	$2,936,454
Cost of Rehabilitation (Table 2-3.4)	1,811,432
Total Project Cost	$4,747,886
Less Salvage of Spring Creek to Moccasin - 1/2000 x (77.5 x 2 x 5280 x 1/3 x 21.5 + 2 x 21.5) x $80/ton	234,610
Net Project Cost	$4,513,276

SOURCE: Montana Department of Commerce

TABLE 2-3.6
LINE FACILITIES CONDITION
Lewistown to Moore

Mileposts - 61.0 to 43.4, a total of 17.6 miles

Rail - Approximately 5 miles of 77.5 lb. rail; the remaining 12.6 miles of rail are 90 lb. rail in 33 foot lengths. The gauge was right on 56½ inches on tangent rail throughout the project. Joint bars are 4 hole 24" bars in good condition. The line and surface are fine to good.

Ties - This is the weak link in this line. About 8 per rail, or 1280 ties per mile need to be replaced. These ties are mainly hardwoods that are 30 to 50 years old.

Tie Plates and Anchors - 100 percent of the ties are plated with 7" x 10" single shouldered plates. There were very few plate cut ties found. The anchor pattern was found to be deficient. There are 8 anchors per each rail length, but at least 3 per rail are ineffective. There are no slewed ties so the anchors in place are sufficient for current traffic. However, when the ties are replaced and the rail is surfaced, additional anchors will prevent future rail movement while under heavier traffic. This rail will go from a seldom used branchline to a regularly travelled route, carrying unit trains constantly.

Ballast - The ballast on the line is fouled with fines, and consists of pit run gravel, unsized. A lift of 6" crushed stone is suggested.

Bridges - There are 5 bridges on the line totalling approximately 75 linear feet. There is one major trestle on the line at Glengary.

Roadbed/Ditching - No major roadbed or ditching problems were noted.

Vegetation - Track generally clear.

Timetable Speed - 25 mph across the whole line.

Weight Restrictions - 263,000 pounds.

Net Liquidation - From Lewistown to Moore the liquidation value is $225,870 (materials) and $850,350 (land).

SOURCES: Montana Department of Commerce
Burlington Northern Railroad
Railway Line Clearance, Vol. 191, 1981

Rehabilitation & Reconstruction

To rehabilitate from Lewistown to Moore, to rebuild on the abandoned grade from Moore to Sipple, and to build a new section of track 1 mile in length from Sipple to the Burlington Northern's mainline would cost an estimated $4,513,276. The benefits from this project include lower transportation costs. These costs would increase if an abandonment were to occur. The total benefits expected over a 20-year period are estimated to exceed the costs. The benefit/cost ratio is 1.38. These figures are tabulated in Table 2-3.9.

Conclusions

The benefit/cost ratio for this project is greater than 1.0. This branchline is essential to the economic future of Montana's 12th largest urban area, Lewistown. It is felt that if this rail project were undertaken, it would stabilize rail service to the Lewistown area and guarantee service over many years beyond its projected life of 20 years. Once the Moore to Sipple connection is made, the normal yearly maintenance program will hold it to a good Class II line indefinitely. Assistance may be required because the new construction can currently be only marginally self-supporting with such a high initial cost.

TABLE 2-3.7
RAILROAD USE STATISTICS - 1982
Lewistown and Moore

STATION	CARLOADS Number	CARLOADS Percent	TONS Number	TONS Percent	COMMODITY
					Originating
Moore	29	2.7%	2,900	3.3%	Farm Products
Lewistown	882	84.1	73,520	83.1	Farm Products
	911	86.8%	76,420	86.4%	
					Terminating
Lewistown	48	4.6%	4,800	5.4%	Livestock Feeds
	20	1.9	300	0.3	Farm Equip.
	9	0.9	900	1.0	Fertilizer
Moore	61	5.8	6,100	6.9	Fertilizer
	138	13.2%	12,100	13.6	
TOTAL	1,049	100%	88,520	100%	

1982 Statistical Summary

Length:

Lewistown to Moore	17.6 miles
Moore to Sipple to Mainline	6.4 miles
Lewistown to Mainline	24.0 miles
Lewistown to Spring Creek	9.2 miles
Spring Creek to Moccasin	21.5 miles
Million Gross Ton-Miles Per Mile	0.1862
Carloads Per Week	20.2
Carloads Per Mile	43.7
Revenue	$2,038,060

SOURCE: Montana Department of Commerce

TABLE 2-3.8
DISTRIBUTION OF BENEFITS
Lewistown to Moore to Sipple
Rehabilitation and New Construction

BENEFIT TYPE	DESCRIPTION	ESTIMATED BENEFIT
Railroad	Annual cost savings on-branch	$ 849,676
	Annual cost savings off-branch	1,188,424
Truck/User	Annual line haul and handline cost savings	433,500
Barge/User	Annual cost savings	17,900
Other	Net salvage value	1,500,603
	Efficiency Savings	353,812

Note: Negative value indicates disbenefit to affected party

SOURCE: Montana Department of Commerce

TABLE 2-3.9
BENEFIT-COST ANALYSIS
Lewistown to Moore to Sipple

Alternative Project	Project Cost	Present Value (1) Benefit	Cost	Net	Benefit/ Cost Ratio
Rehab and New Construction	$4,513	$42,947.0	$31,166.1	+$11,780.9	1.38

(1) Discount Rate - 4 percent
Project Life - 20 years
All monetary figures are in thousands of dollars

SOURCE: Montana Department of Commerce

CHAPTER 3

PRIORITIES FOR PROJECT ASSISTANCE

This chapter is written to supplement Chapter 6 of the 1982 Rail Plan Update. That chapter also listed the analyzed lines according to the project consideration to be given them. With the addition of the three projects analyzed in this Supplement, it is necessary to insert these projects into the priority listing to present a total perspective. Thus, the tables presented in Chapter 6 of the 1982 Update have been modified and the new tables are found here.

In total, the 1982 Update to the Montana Rail Plan and the 1983 Supplement have examined 24 rail projects, all of which are eligible for project assistance under the Federal Local Rail Service Assistance program. The purpose of these analyses is to qualify any potential projects for the receiving of federal assistance. Since the original State Rail Plan, published in 1979, the State has analyzed and qualified nearly every eligible line in the State.

As has been stated in previous publications, this document is used only to evaluate and qualify potential projects. This document does not aim to rate or rank the projects analyzed.

For analysis purposes, all projects evaluated had two alternatives: to build and/or repair versus abandonment. Federal funding for a threatened line is not the only corrective action available--there may be other alternatives available, such as

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For analysis purposes, all projects evaluated had two alternatives: to build and/or repair versus abandonment. Federal funding for a threatened line is not the only corrective action available--there may be other alternatives available, such as

surcharges, greater usage of rail service by the present shippers, encouraging additional business or industries to use the facilities, possible shipper investment in the line itself, etc. Because of the present federal administration's pessimistic attitude towards continuing the Local Rail Service Assistance program, it is important that threatened communities examine all available alternatives.

Rail Line Statistical Summary

Chapter 2 of this document and chapter 5 of the 1982 Update contain 24 individual in-depth analyses of some of the projects in Montana eligible for project assistance. Table 3-1.1 is presented here to summarize and to compare the traffic and rail user information for all 24 of these prospective projects.

Net Revenue

Table 3-1.1 indicates that a significant number of lines were profitable at the time studied. In this document, this can be seen in both the Lewistown to Moore and Lewistown to Geraldine lines. If a line is profitable, an observant person would be asking why federal funds are being requested for assistance in maintaining the lines. This can be seen in the analysis of Lewistown to Moore or Lewistown to Geraldine, where the rehabilitation costs required to maintain safe, efficient

trackage consumes all of the profits and also runs the branchline into the red. As a result, the railroad could continue to operate a line at a profit so long as rehabilitation was not performed, but this situation obviously could not continue indefinitely.

TABLE 3-1.1
PROJECT STATISTICAL SUMMARY

LINE/STATUS(1)	LENGTH	1980 NET REVENUE (000's)	1980 CARS	CARS/ MILE	RAIL USERS	MAJOR TRAFFIC
Bainville/ Opheim - L	146.6	$1,007.7	2,889	19.7	32	Farm Products, Chemicals
Big Sandy/ Fort Benton - I	43.2	(2)	75	1.8	1	Farm Products
Brazil Creek Spur - L	18.7	(2)	88	4.7	1(3)	Nonmetallic Minerals
Butte/ Whitehall - I	28.8	(2)	0	0	0	None
Circle/ Brockway - I	10.5	62.2	103	9.8	1	Farm Products
Columbia Falls/ Somers - L	24.9(5)	1,094.0	3,537(6)	114.5(7)	10	Farm Products, Lumber, & Wood Products, Petroleum Products, Scap
Dixon/Polson - L	33.4	- 192.2	942	28.2	13	Lumber & Wood Products
Drummond/ Phillipsburg - L	26.3	- 285.8	86	3.3	3	Lumber & Wood Products
Durant/Brown - L	18.2	(9)	(9)	(9)	(9)	(9)
Fromberg/ Bridger - I	6.1	- 38.1	44	7.2	3	Farm Products, Chemicals
Glendive/ Circle - L	53.7	72.4	739	13.8	8	Farm Products Chemicals
Lavin Spur - L	4.4	(9)	66	15.0	1	Farm Products
Lewistown/ Geraldine - I	74.5	3,382(10)	1,299(10)	17.4	7	Farm Products, Machinery
Lewistown/ Moore - L	24.0	2,038(10)	1,049(10)	43.7	12	Farm Products
Manhattan/ Anceney	15.2	- 38.2	116	7.6	5	Farm Products
Mission/Wilsall - I	22.9	135.2	405	17.7	3	Farm Products
Newcomb to Idaho line	133	1,000(4)	1550(4)	(2)	1	Farm Products
Newlon Jct./ Richey - L	45.4	172.2	389	8.6	8	Farm Products, Chemicals
Nichols Wye/ Big Sky - C	39.1	(9)	(9)	(9)	(9)	Coal
N.D. Line/ Whitetail- L	56.9	960.1	696	12.2	5	Farm Products
Phosphate Spur - I	3.6	0.0	0	0	0	None
Sarpy Jct./ Kuehn - C	35.9	(9)	(9)	(9)	(9)	Coal
Stryker/Eureka - L	23.2	67.1	2,066	86.5	3	Lumber & Wood Products

Table 3-1.1 Continued

LINE/STATUS(1)	LENGTH	1980 NET REVENUE	1980 CARS	CARS/ MILE	RAIL USERS	MAJOR TRAFFIC
Three Forks/ Whitehall - L	31.4	$398.1(11)	1,511(11)	48.1(11)	8(11)	Nonmetallic Minerals
Valier Jct./ Valier - L	17.2	874.7	759	43.9	4	Farm Products, Chemicals

(1) I - Could be abandoned within 3 years
II - Under study by railroad
III - Abandonment decision pending
A - Abandoned
L - Light density line not potentially subject to abandonment
C - Coal line, not eligible for assistance but included for information
P - Proposed project - not yet constructed
(2) Not meaningful
(3) Shipper closed temporarily
(4) These figures are projected estimates
(5) Only first 14.4 miles has revenue traffic
(6) 1,888 cars are non-revenue BN company traffic
(7) Revenue traffic over revenue segment
(8) Line out of service
(9) Not available
(10) These figures are for 1982
(11) Includes Whitehall/Alder branch

SOURCES: Chapter 2 of this document
Chapter 5 of Montana's 1982 Rail Plan Update

Rail Traffic

As listed in the 1982 Update, a traditional measure of performance for a branchline is the number of carloads carried divided by the length of the line. This figure gives an indication of a line's ability to produce revenues sufficient to cover normalized maintenance costs, operating costs, and to some extent, a return on the investment. This figure, under the Cars/Mile heading, varied from 1.8 to 114.5 for the lines analyzed in the 1982 Update. The new lines analyzed in this supplement had 17.4 and 43.7 cars per mile in 1982. This puts both of these lines into the mainstream relative to all of Montana's branchlines.

Rail Users and Commodities

The 1982 Update listed the individual shippers on each branchline. This has not been done in this Supplement in order to assure confidentiality to survey respondents. Table 3-1.1 identifies the number of present shippers on all analyzed lines. The lines analyzed in this 1983 Supplement can be considered normal for Montana, i.e., 80 percent of the revenue traffic from these branchlines come from the movement of agricultural products.

Alternatives for Project Assistance

In the 1982 Update, different options for project assistance

were analyzed in Chapter 5. These options are summarized in Table 6-2, presented on pages 6-5 and 6-6. Table 3-1.2 presented on page 71 is an addendum to Table 6-2 in the 1982 Update.

As stated in the Update, projects with Benefit/Cost ratios of greater than 1 are economically viable projects in that the monies invested over the life of the project have less value today than the present value of the direct monetary benefits to be derived from the project. The 1982 Update listed 21 projects, with Benefit/Cost ratios ranging from 0.0 to 4.35.

Priorities for Project Assistance

Since there is not a sufficient amount of money to implement a project for each of the lines analyzed, it is important that the State group the projects analyzed according to their project potential. The State has ranked these lines for assistance purposes based on both quantitative and qualitative factors. An updated ranking is contained in Table 3-1.3 This table replaces Table 6-3 in the 1982 Update.

TABLE 3-1.2
SUMMARY OF PROJECT ALTERNATIVES
An Addendum to Table 6-2 of Montana's 1982 Rail Plan Update

LINE/ALTERNATIVE	PROJECT COST	Benefits	PRESENT VALUE (1) Costs	N.P.V.	B/C
Butte's Grain Subterminal	$ 2,700.0	$73,624.7	$13,118.6	$60,506.2	5.61
Lewistown to Geraldine - Rehab. Geraldine to Denton and Build Dover to Arrow Creek	16,250.0	51,402.0	46,105.0	5,297.0	1.11
Lewiston to Moore - Rehab plus build new connection to Sipple	4,513.0	42,947.0	31,166.1	11,780.9	1.38

(1) Discount rate of 4 percent
Project life of 20 years
All monetary figures are in thousands of dollars (000's)

SOURCE: Montana Department of Commerce

TABLE 3-1.3
PROJECT ASSISTANCE PRIORITIES
Lines Analyzed in 1982 Update and 1983 Supplement

PROJECT	ALTERNATIVE	PROJECT COST (000's)
	Serious Consideration	
Butte's Grain Subterminal	New Construction	$ 2,700.0
Lewistown/Moore/ Sipple	Rehab/New Construction	4,513.0
Lewistown/ Geraldine	Rehab/New Construction	16,250.0
Bainville/Scobey	Rehabilitation	4,673.0
Bainville/Opheim	Rehabilitation	9,341.7
North Dakota Line/ Whitetail	Rehabilitation	5,330.4
Valier Jct./Valier	Rehabilitation	2,203.3
Manhattan/Amsterdam	Rehabilitation	791.6
	Potential Consideration	
Glendive/Circle	Rehabilitation	1,983.9
Mission/Wilsall	Acquisition	297.0
Newlon Jct./Richey	Rehabilitation	5,099.2
Dixon/Polson	Rehabilitation	995.2
Big Sandy/ Fort Benton	Rehabilitation	808.9
Lavin Spur	Rehabilitation	188.8
Fromberg/Bridger	Acquisition	190.0
Drummond/Philipsburg	Acquisition/Rehabilitation	1,504.6
	Little or No Consideration/Reason	
Brazil Creek Spur	No existing traffic, indefinite mine opening	
Butte/Whitehall	No apparent project benefit	
Columbia Falls/ Kalispell	No rehabilitation needed	
Kalispell/Somers	No revenue rail users	
Durant/Anaconda	No rehabilitation needed	
Anaconda/Brown	No apparent project benefit	
Nichols Wye/Basin	Not eligible, too much traffic	
Phosphate Spur	No existing traffic, indefinite mine re-opening	
Sarpy Jct./Kuehn	Not eligible, too much traffic	
Stryker/Eureka	No rehabilitation needed	
Three Forks/Whitehall	No rehabilitation needed	

Future Activities

At this time, there are still five additional lines that need to be examined and can be identified at this time. They are:

* Desmet to Paradise

* Glendive to Snowden

* Great Falls to Fort Benton

* Loy Spur

* Pacific Junction (Havre to Big Sandy)

The next update prepared by the State of Montana will analyze these five lines as well as the mainline routing revision proposed for traffic west of Mossmain Jct near Billings.

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